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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/800,937

03/15/2004

James Carl Dills

DLS-0401

1290

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7590

05/02/2007

LAW OFFICE OF DALE B. HALLING, LLC  
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EXAMINER

KOEHLER, CHRISTOPHER M

ART UNIT

PAPER NUMBER

3726

MAIL DATE

DELIVERY MODE

05/02/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/800,937

Applicant(s)

DILLS, JAMES CARL

Examiner

Christopher M. Koehler

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/15/04, 8/2/04.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of Species B in the reply filed on 30 January 2007 is acknowledged. The traversal is on the ground(s) that the applicant believes that both species use similar techniques with slight variations. This is not found persuasive because the "slight" variations represented between figures 2 and 3 represent a burdensome search on the examiner. Species B correlates to claims 16-20 while Species A correlates to claims 1-15. Accordingly claims 1-15 are withdrawn from examination.

The requirement is still deemed proper and is therefore made FINAL.

### *Oath/Declaration*

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:  
It does not state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be **material to patentability** as defined in 37 CFR 1.56.

### *Specification*

3. The disclosure is objected to because of the following informalities: On page 1, line 7 applicant incorrectly states that the provisional application was filed on March 17, 2002. Applicant must correct this to state --March 17, 2003--.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 16, 17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Bower-Irons et al. (US Patent No. 5,030,425) subsequently referred to as Bowers.

Claim 16:

Bowers teaches a process of recycling circuit boards comprising the steps of grinding a circuit board (col. 5, lines 15-22); placing the plurality of pieces in a bio-slurry (col. 5, lines 23-35); and extracting a metal (gallium arsenide, germanium compounds, lead and tin solder).

Claim 17:

Bowers teaches the step of determining a level of lead content in a circuit board and when the level of lead does not exceed a predetermined threshold, i.e. the amount of lead in the circuit does not exceed the capability of being leached by the particular culture medium of Bowers, selecting a first type of bio-slurry (the culture medium of Bowers).

Claims 19 and 20:

Bowers teaches removing a liquid from the bio-slurry and processed to have non-contaminated water (col. 5, lines 43-46).

***Claim Rejections - 35 USC § 103***

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bowers in view of Galun et al. (US Patent No. 4,732,681).

Claim 18:

Bowers teaches the method above but fails to teach selecting a second type of bio-slurry if the level of lead exceeds the threshold. Galun teaches a method of removing heavy metal elements from industrial effluents wherein the level of lead is determined and the appropriate processing using a different type of bio-slurry than that of Bowers is used to remove the higher concentrations of lead (col. 2, line 62-col. 3, line 19). It would have been obvious to one of ordinary skill in the art at the time of invention to use the process of Galun in combination or in place of the process of Bowers when the primary concern is the removal of higher concentrations of lead since the process of Galun is capable of removing high concentrations of heavy elements and Bowers is capable of removing lead but is primarily used to leach gallium and germanium.

**Conclusion**

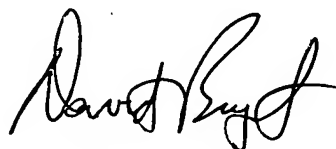
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Koehler whose telephone number is (571) 272-3560. The examiner can normally be reached on Mon.-Fri. 7:30A-4:00P.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMK



DAVID P. BRYANT  
SUPERVISORY PATENT EXAMINER

4/27/07